

<b>Office Action Summary</b>	<b>Application No.</b> 09/487,151	<b>Applicant(s)</b> AMTMANN ET AL.	
	<b>Examiner</b> Dac V. Ha	<b>Art Unit</b> 2634	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) \_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. ____.  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____.   | 6) <input type="checkbox"/> Other: ____.                                    |

## DETAILED ACTION

### *Claim Objections*

1. Claims 1, 3-5, 7-10, 13-14, 16-20, 23-25 are objected to because of the following informalities:

Claim 1, line 11, the recitation "RTZ" should be spelled out clearly (i.e., see claim 20).

Similar issue exists in claims 10, 14, 23, and 25 at "RTZ" first mentioned.

Claim 9, the recitation "the encoded data signal output" should be made consistent with the recitation "the encoded data signal" in claim 1.

Claim 18, line 3, the recitation "second encoding stages" should be changed to "second decoding stages".

Claim 24, lines 15-16, the recitation "the selected" should be made consistent with the terminology used on lines 11-12 of claim 24.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. **Claims 1, 3-5, 7-9, 13, 21-25** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim 1 recites the limitation ""said data signal" in lines 8 and 9-10. There is insufficient antecedent basis for this limitation in the claim.
5. Claim 13 recites the limitation "the decision stage" in line 2. There is insufficient antecedent basis for this limitation in the claim.
6. Claim 21 recites the limitation "said data signal" in lines 8, 9, 12. There is insufficient antecedent basis for this limitation in the claim.
7. Claim 22 recites the limitation "said data signal" in lines 8, 9, 12. There is insufficient antecedent basis for this limitation in the claim.
8. Claim 23 recites the limitation "said data signal" in lines 8, 9, 13. There is insufficient antecedent basis for this limitation in the claim.
9. Claim 24 recites the limitation "said data signal" in line 8. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. **Claims 1, 3, 5, 7-10, 13-14, 16-25** are rejected under 35 U.S.C. 103(a) as being unpatentable over Dent et al. (US 6,044,485) (hereinafter Dent).

**Regarding claim 1**, Dent teaches the followings:

“receiving means for receiving a modulated carrier signal which contains an encoded data signal” (Figure 2, element 200; Col. 4, line 57);

“demodulation means for demodulating the received modulated carrier signal and for outputting the encoded data signal contained therein” (Figure 2, element 204; Col. 4, lines 58-59);

“decoding means for decoding the encoded data signal and for outputting data” (Figure 2, elements 208, 210);

“data processing means for processing the data output by the decoding means” (Figure 2, elements 212, 214, including any subsequent processing circuit that is not shown in Figure 2);

“the decoding means including at least a first decoding stage and a second decoding stage, the first decoding stage being arranged to decode said data signal encoded in conformity with a first decoding method whereas the second decoding stage is arranged to decode said data signal encoded in conformity with a second decoding method” (Figure 2, elements 208, 210; Abstract; Col. 4, lines 8-16; 64-65).

Dent differs from the claimed invention in that Dent doesn't teach the claimed subject matter “wherein said first decoding method is RTZ and the second decoding method is Miller”. However, Dent explicitly indicates that any of the known coding techniques may be advantageously employed in the present invention (Col. 1, lines 40-41) and each of them has its advantage and disadvantage relative to the application (Col. 3, lines 13-17). Therefore, a person of ordinary skill in the art at the time of the invention would have realized that the particular “decoding method” is design specific depending on particular application.

**Regarding claim 3**, Dent further teaches the claimed subject matter “a decision stage capable of receiving decision supporting information from at least one of the at least two decoding stages, and that the decision stage is arranged to decide, by evaluation of the decision supporting information applied thereto, which of the at least two decoding stages is suitable to decode a received encoded data signal” in Col. 5, lines 1-19.

**Regarding claim 5**, the claimed subject matter “wherein ... processing means” would have been optional to one skilled in the art based upon available resources and design particular.

**Regarding claim 7**, Dent further teaches “an encoding means ... encoding stage” in Figure 1, elements 110; Col. 3, lines 55-58.

**Regarding claim 8**, Dent explicitly indicates that any of the known coding techniques may be advantageously employed in the present invention (Col. 1, lines 40-41) and each of them has its advantage and disadvantage relative to the application (Col. 3, lines 13-17). Therefore, a person of ordinary skill in the art at the time of the invention would have realized that any coding method could have been utilized as optional.

**Regarding claim 9**, Dent further teaches the claimed subject matter “modulation means ... output” in Col. 4, lines 50-54; Figure 1, element 116.

**Regarding claim 10**, see claim 1 above.

**Regarding claim 13**, Dent further teaches the claimed subject matter “wherein ... data signal” in Col. 5, lines 1-24.

**Regarding claim 14**, see claim 3 above.

**Regarding claim 16**, see claim 13 above.

**Regarding claim 17**, see claim 3 above.

**Regarding claim 18**, see claim 5 above.

**Regarding claims 19, 20**, see claim 8 above.

**Regarding claim 21**, see claim 1 above. Further, Dent doesn't teach "the first decoding stage" and "the second decoding stage" "simultaneously" decoding. However, Dent, in a prior reference (Col. 5, lines 19-21), teaches a configuration in which parallel decoders "simultaneously" decoding the signal, then determine which decoding is suitable (Dent et al. US 5,230,003, Abstract). Therefore, it would have been optional to one skilled in the art at the time of the invention to either "simultaneously" decoding the signal then determine the suitable decoding to be used or to determine which decoding method is suitable and then utilize such decoding method.

**Regarding claim 22**, see claim 21 above.

**Regarding claim 23**, see claims 21 and 1 above.

**Regarding claim 24**, see claim 3 above. Further, Dent teaches the claimed subject matter "once the decision stage applies ... data signal" in that, when it is determine a different decoding method needs to be utilized, the switch 212 would select a different decoding stage and utilize such decoding for the rest (Col. 5, lines 13-24).

**Regarding claim 25**, see claim 1 above.

2. **Claim 4** is rejected under 35 U.S.C. 103(a) as being unpatentable over Dent in view of Ohira et al. (US 6,735,735) (hereinafter Ohira).

**Regarding claim 4**, Dent teaches all the claimed subject matter in claim 4, as stated above, except for the claimed subject matter “wherein the encoded data signal ... to decode the encoded data signal”. The attention is now directed to Ohira. Ohira discloses transmission method in which the encoder adds an identifier to the signal so that the decoder can determine whether execution of decoding process to done or not based on such identifier (Abstract). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize the same concept as taught by Ohira into Dent so that the decoder would have the knowledge of which decoding method is to be used, thus the system can be executed faster.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dac V. Ha whose telephone number is 703-306-5536. The examiner can normally be reached on 5/4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Stephen Chin can be reached on 703-305-4714. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

Art Unit: 2634

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dac V. Ha  
Examiner  
Art Unit 2634